

## **REMARKS**

### **I. Status of the Claims**

Claims 5-13, 16, 17, 24-28, 40 and 41 are pending. Claims 5-8 are allowed. Claims 9, 10, 13, 16, 17, 25, 26, 40 and 41 stand rejected under Section 102(e). Claims 11 and 12 stand rejected under Section 103(a). These rejections are addressed below.

Claims 9, 13 and 25 have been amended to the form set forth above to more particularly point out the invention. More specifically, in each instance the claims have been amended to recite that the longitudinally extending wall portions of the spacer radiate axisymmetrically from the center portion. These amendments are supported by, *inter alia*, **Figures 3 and 4** of the specification.

### **II. The Section 102(e) Rejections**

Claims 9, 10, 13, 16, 17, 25, 26, 40 and 41 stand rejected under Section 102(e) based on U.S. Patent No. 6,297,454 to Gaeris (Gaeris). Specifically, Gaeris is characterized as disclosing a communications cable with a cable jacket **43** and a spacer **20**, wherein the spacer **20** meets the recitations for the shape of the wall portions of the spacers recited in Claims 9, 13, 25 and 40.

Notably, the Gaeris spacer **20** has a "major axis **21**" and a "minor axis **22**" (*see* Gaeris at column 2, lines 45-46), which enables the cable to use "an oval envelope spline having four pockets and . . . a twisted pair cable in each pocket." *Id.* at column 1, lines 42-44. Gaeris states that "[t]he long lay twisted pair cables are both preferably in the pockets on the major axis of the oval envelope. The short lay twisted pair cables are both in the pockets on the minor axis of the oval envelope." *Id.* at lines 44-46.

According to Gaeris, this configuration has desirable performance advantages.

Short lay pairs, which have the best flexibility can be placed across the minor axis of the separator spline. Short lays typically have improved NEXT and the close proximity to one another does little to worsen NEXT. The long lay pairs can be placed across the major axis where bending strain is minimized. This overall cable design will bend across the minor axis based on the fact that the "column" will collapse across its minimum integral bending moment axis. The use of [the] elongated separator spline also

improves skew over a similar round design because two unique cabling lay factors are in practice when the twisted pairs are cabled (minor and major axis). This helps compensate for the pair lengths between the long and short lay pairs equalizing the final conductor lengths which also tends to improve attenuation delta from the minimum lay pair to the maximum lay pair.

*Id.* at column 1, lines to column 2, line 2.

Turning now to the pending claims, each of the claims recites that the elongate wall portions of the spacer radiate **axisymmetrically** from the center portion to define compartments within the cable jacket. It is clear from the foregoing passages that the Gaeris spacer is not configured with axisymmetrically radiating wall portions, but instead has walls that extend from the ends of an oblong portion at the center of the spline **20** to define major axis pockets **23, 24** and minor axis pockets **26, 27**. The absence of axisymmetrically-radiating wall portions in the Gaeris spacer compels a finding that Gaeris cannot anticipate any of the pending claims. As such, Applicant respectfully requests that the rejections under Section 102(e) based on Gaeris be withdrawn.

### **III. The Section 103(a) Rejections**

Claims 10 and 11 stand rejected under Section 103(a) based on Gaeris in view of U.S. Patent No. 5,969,295 to Boucino (Boucino). Gaeris is cited as set forth above. Boucino is cited for a cable having a spacer with a helical configuration. The Action combines these references to arrive at a conclusion that the claimed subject matter would have been obvious to the ordinarily skilled artisan.

In response, Applicant submits that Gaeris clearly fails to suggest any configuration in which axisymmetric wall portions are included. In fact, the passages from Gaeris cited above clearly teach away from a spacer with axisymmetrically-radiating wall portions, as Gaeris describes in some detail why non-axisymmetric spacers have performance advantages. While Applicant concedes that Boucino does illustrate axisymmetrically-radiating wall portions, Gaeris strongly discourages such a configuration.

Applicant also notes that each of the pending claims includes language regarding the shape of the wall portions that denotes some variation in wall thickness as the wall portion radiates from the center portion of the spacer. These variations can improve the stability of the twisted pairs contained in individual compartments defined by the wall portions and the

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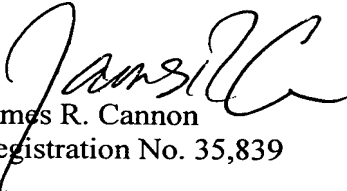
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surrounding cable jacket, with each twisted pair being positioned in roughly the same location in its compartment as other twisted pairs. In contrast, the spacer of the Gaeris cable (which has somewhat bulbous walls that confine twisted pair cables in place) places twisted pairs at different distances from other twisted pairs based on their lay length, and the passages of Gaeris cited above clearly indicate that such positioning is preferable. As such, Applicant submits that it would not have been obvious to the ordinarily skilled artisan to combine Gaeris, which insists upon axisymmetric placement of twisted pairs, and Boucino, which discloses axisymmetrically-radiating wall portions, to arrive at the subject matter of the claims. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

#### IV. Conclusion

Inasmuch as the outstanding issues raised in the Action have been addressed, Applicant respectfully requests that the present application be passed to allowance and issue.

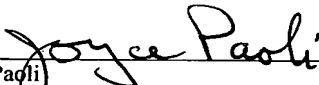
Respectfully submitted,

  
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#### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed Commissioner for Patents, Washington, DC 20231, on March 4, 2003.

  
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Joyce Paoli  
Date of Signature: March 4, 2003

**VERSION MARKED TO INDICATE CHANGES**

**In the Claims:**

Please amend the following claims.

9. (amended) A communications cable comprising:

a cable jacket;

a spacer extending within the cable jacket, the spacer having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating axisymmetrically from the center portion, the longitudinally extending wall portions decreasing in thickness over only a portion thereof from the center portion to the cable jacket, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and

a twisted pair of insulated conductors disposed in one of the plurality of compartments.

13. (thrice amended) A communications cable comprising:

a cable jacket;

a spacer extending within said cable jacket, the spacer being formed of and having an outer surface of a polymeric material and having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating axisymmetrically from said center portion, the longitudinally extending wall portions having a first radial section that increases in thickness with distance from the center portion and a second radial section that decreases in thickness with distance from the center portion, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and

a twisted pair of insulated conductors disposed in at least one of the compartments.

25. (thrice amended) A communications cable comprising:

a cable jacket;

a spacer extending within said cable jacket, the spacer being formed of a polymeric material and having a longitudinally extending center portion and plurality of longitudinally

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extending wall portions radiating axisymmetrically from said center portion, the longitudinally extending wall portions including a first section having a first thickness, a second section having a second thickness and a third section having a third thickness, the third thickness being different from the first and second thickness, the third section located between the first section and the second section, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and

a twisted pair of insulated conductors disposed in at least one of the compartments.

40. (amended) A communications cable comprising:

a cable jacket;

a spacer extending within said cable jacket, the spacer having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating axisymmetrically from said center portion, the longitudinally extending wall portions having a convex shaped cross-section, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and

a twisted pair of insulated conductors disposed in at least one of the compartments.